

Origins of Human Communication

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Lecture 3. The Early Ontogeny of Co-operative Communication

Infants' co-operative gestures have full adult structure from their outset.

⇒ Some think infants' early pointing not "real thing"

⇒ Here: yes, both in terms of structure and motivation ⇒ BEFORE LANGUAGE

3.1. Early Pointing at 12 Months

- Infants social initially only dyadically ⇒ 9-month revolution
- Joint Attentional Frame
 - Comp: Behne et al. (2005a) object choice - 12-14 mos.
 - Comp: Liebal et al. (in prep) on shifting JAFs - 18 mos.
 - control cond: frame must be shared!
 - Production: Table 2a [12-13 mos.]
 - point to table vs. chair for same function
- Referential Intention
 - Moore's challenge: infants point when A already looking
 - Liszkowski et al. (2004) - 12 mos. ⇒ need target
 - Liszkowski et al. (submitted a) - 12 mos. - misunderstand referent
 - need specific target
 - Liszkowski et al. (submitted b) - 12 mos. - absent referents
 - see also Table 2a
 - Golinkoff: negotiation of meaning at 10-18 mos.
- Social Intention (Motive)
 - Expressives: *I want: we know: I want: we feel X*

- 12 mos: Liszkowski et al (2004): sharing attention & attitudes
- 12 mos: Liszkowski et al (sub a) - wrong attitude
- Informatives: *I want: we know: I want: you know X*
 - 12-14 mos: Behne et al. (2005a) - comprehend informative
 - 12 mos: Liszkowski et al (2006) produce informative
 - Liszkowski et al (in prep) follow up on 'knowledge'
- Requestives: *I want: we know: I want: you do X*
 - 11-12 mos: Camaioni (co-operative or individual?)
 - 24 mos: Schwe-Behne - co-operative imperative
- No pointing for greeting, thanking, apologizing
 - referent = my feeling
 - w/ language: all early, 18 mos. (comprehension?)
- Communicative Intention [¿really?]
 - Not hidden authorship, but something more primordial
 - Adults want infants to do things; infants know this
 - learn to direct things to others: eye contact, etc.
 - Albrecht et al: 12 mo. olds know that others must see gesture
 - Behne et al. (2005a) control condition at 14 mos. - see as not communicative
 - in experimental condition make relevance inference
 - Liszk (sub b): 12-mo-olds point still after sharing w/ adult (to stress comm?)
 - Shwe-Behne: 2 yr olds correct misund. even when get what want
 - Moll & T - 14-mos. know what we experienced together
- Characterizing gestures
 - Early ritualizations: reject, put--me-down, pick-me-up (like apes, 1-way)
 - Diary examples, Table 2b
 - taught baby signs = like words; iconic? invented?

- spontaneous examples in Table 2b
 - Understand such gestures for objs (not replicas) by 18 mos (T et al, '99)
 - for 'actions I should do' by 30 mos (Haimerl in prep) (videos)

3.2. *The Early Ontogeny of Pointing*

- Infants have pointing hand-shape at 3 to 6 months (Hannan, 1987)
 - Infants solicit adult help (requestive) at 3 to 6 months
 - Infants share emotions (expressive) at 3 to 6 months
 - Why no communicative pointing?
- Answer: don't understand or share intentions until 9-12 months
 - Und goals & intentions: Gergely et al. (1995); Behne et al. (2005b): 9 mos.
 - Gergely et al. ('02); Schweir et al. (in press) - rational choice: 12- mos.
 - Und. perception & attention.: Tomas & Haberl (2003): 12 mos.
 - Moll et al. (in press) - rational choice: 14 mos.
 - Und. what others 'know': Onishi & Baill, 2005; T & Haberl , 2003: 12 mos.
 - Mutual attention/knowledge: Moll & Tomas (in press): 14 mos.
 - Helping: Kuhlmeir et al., 2003; Warneken & T (2006): 12-14 mos.
 - Reciprocal tendency & expectation to help: ¿convention?
¿norm?
- THIS ANSWER PROVIDES EVIDENCE THAT EARLY POINTING BASED ON MENTAL STATES AND CO-OPERATIVE MOTIVES & JUSTIFYS PRIMITIVES
- Sidebar: where does this come from? Two lines:
 - (1) understanding intentional action - all apes (to some degree) => 9-12 mos.
 - intentions and attention (rational choice - apes?)
 - (2) sharing psychological states (id w/other) - only humans => from birth
 - dyadic protoconversations from early infancy

⇒ 9-12 months: merging of two lines: shared goals, intentions, attention
- Learning

- origins of pointing unknown
 - ritualization vs imitation: conventionalization?
- origins of char. gestures and baby signs unknown
 - creative iconic/metonymic vs. imitation

3.3. Conclusion

- Early gestures have full structure of co-op. comm. [before language]
 - based on mental states: intentions & attention & knowledge (not beliefs)
 - perspective & absent referents
 - based on shared intentionality: joint intentions & attention & knowledge
 - motives of helping & sharing (incl. informing)
- Concealed authorship, deception, sarcasm/irony => later (3-4 years)
- Learning & acquisition of pointing & other gestures?

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Table 2a: Child Pointing

1. Get me that! (classic imperative/requestive)
2. Look at that! (classic declarative/expressive)
3. Point for self/ambiguous

Jaron 11; 4 Point + insist	Points to window when wants it open
Jaron 11; 4 Point + neutral	In buggy turns around and points behind, looks to Mom, then points ahead and looks to Mom
Jaron 11; 19 Point + neutral	As Dad prepares to leave J points to door
Jaron 11; 20 Point + insist	Mom pouring water; J points to his glass to tell her to pour him some
Jaron 12;2 Point +negative	Mom tells J not to touch her hot teacup; later he points to it and says "No"., looking to her for confirmation
Jaron 12;4 Point + neutral	When Mom asks where J got something from he points out the door and says "Da."
Jaron 13;7 Point + excite	J watches as Dad arranges Xmas tree; when Grandpa enters room J points to tree and says "Oh!"
Jaron 13; 25 Point + neutral	J bumps his head or falls, and when Mom comforts he points to offending object or location
Alex 12;10 Point + excite	Points to sky to sound of airplane out the window (can't see).
Lisa 13;16 Point + neutral	After eating points to bathroom anticipating going to wash hands
Lisa 13;20 Point + neutral	Mom is looking for missing fridge magnet, and L points to basket of fruit where it is (hidden under fruit)
Lisa 13;23 Point + neutral	L pulled heating lamp hallway off wall; Mom reacts; Dad comes in and L points to show what happened
Lisa 13;25 Point + neutral	L points to door and says "Papa" when it's about time for him to come home
Lisa 14;13 Point + neutral	Mom bringing highchair to table; L points where it goes
Lisa 14;17 Point + insist	When wants to get into buggy or highchair points to it

Table 2b: Other Child Gestures

Alex Pre-12	Hands up - pick me up	
	Reach - please give	
	Put Mom's hand to pocket so she will get stuff out	
	Bounce excitedly - do it again	
	*Wave	
	*Shake head yes, no	
	*Baby Sign - eat	
	*Baby Sign - bugs go away	
Alex 12 -13	Starts games (e.g., blink) and waits expectantly for Mom to take her turn	
	Opens and closes fingers for 'wash hands' (not taught)	
	Holds up objects and looks to Mom quizzically to ask for name	
	*Baby Signs: bath, ball, fan, elephant (+ sound), butterfly, bunny, flower, fish, caterpillar, penguin	
Alex 14-15	Mimics sound of vacuum cleaner	
	Palms up - where?	
	Brush hands together - all done	
	Shake head 'no' as pretends to bite balloon - looking to Mom	
	Shake head 'no' as pretends to bite balloon - looking to Mom	
	Motion to Mom, while his diaper is being changed, to put toy back in can	
	Fingering his chest for strings on Mom's shirt	

